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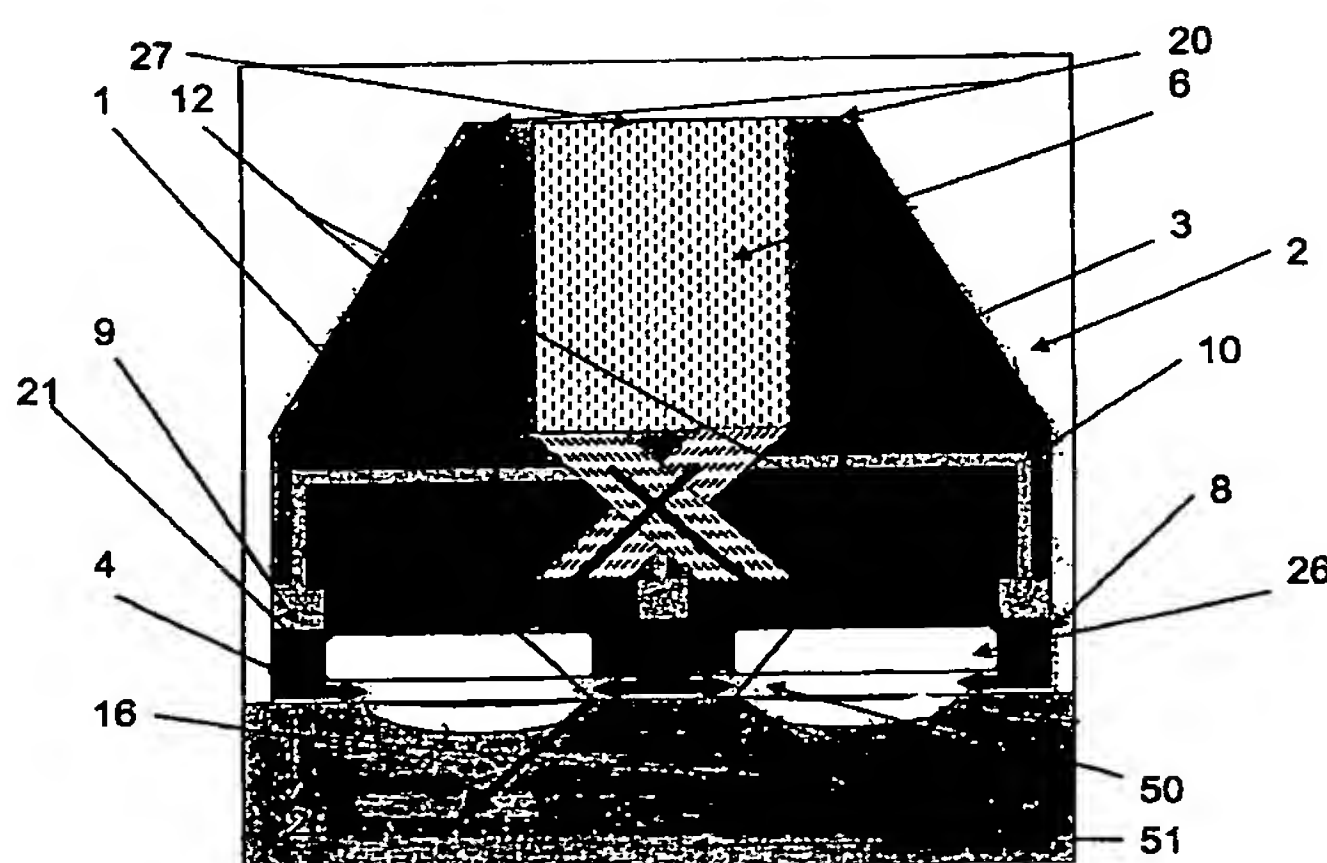
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(54) Title: METHOD, DRILLING MACHINE, DRILL BIT AND BOTTOM HOLE ASSEMBLY FOR DRILLING BY ELECTRICAL DISCHARGE PULSES



(57) Abstract: Machine for ground drilling, with a circulating fluid, by the utilization of electric discharge generated by high-voltage pulses between electrodes. It may comprise:- A drill-bit 1 with electrodes movable relative to each other, so that bottom-hole physical contact be secured for all the electrodes 4 on all bottom-hole topographies. - Pointed hydraulic nozzles for jetting the fluid, to remove primary cuttings and with pressure expansion across the nozzles 7 at no less than 4MPa. - A high-voltage pulse generator deployed down-hole at a minimum distance from the drill-bit 1. - A rotating or oscillating bit causing the borehole cross-sectional excavation to occur, and electric discharge between a plurality of electrodes situated on the bit face along one or a few radii and tangents. - A bottom hole assembly for annular hole-making with core storage, transportation, down-hole closed loop discharge fluid circulation. A discharge fluid storage may be incorporated. A drilling method is also described.



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